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How Organized Medical Care Can Advance Public Health

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THE AMERICAN PUBLIC HAS COME TO EXPECT MORE FROM MEDICINE than it can deliver and far less from public health than it can accomplish. In the United States we expect doctors to fix what is broken—our injuries, diseases, and their consequences—but rarely do we expect that our social institutions, in particular our public health authorities (health departments and environmental and worker protection agencies), will prevent exposures that cause ill health. Yet too often those at risk from hazards remain unaware of any danger until symptoms betray irreversible damage that medical care cannot repair. Our purpose here is to suggest how a systematic and strategic alliance between organized medicine—clinical practices linked by insurance mechanisms, referral systems, or ownership—and public health authorities can achieve a population-wide benefit, improved health for the nation. In particular, health plans with enrolled members can, through such an alliance, improve the effectiveness of both their own efforts and those of public health agencies.

We argue that the essential elements of public health—population-based analysis and social and institutional interventions—must be strengthened if we are to glean better health results from our trillion-dollar investment in the health sector. Perhaps of equal importance, we argue that organized medical care must play a leading role in strengthening these interventions if, as a nation, we are to succeed. Implicit in this argument is our conviction that a universal medical care system would enhance our ability to intervene at the population level.¹

DISTINGUISHING PUBLIC HEALTH FROM MEDICAL CARE

Unlike clinical programs, public health interventions can target communities and workplaces to attack sources of harm. The power to do so derives from the US Constitution and resides principally with the states. States delegate responsibility to cities, towns, counties, and districts, depending on the region of the country. The Federal government has developed sepa-



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rate and limited responsibilities for conducting health research and regulating food and drugs. Although the Federal government has also launched programs to regulate threats to health—air and water pollution; drinking water contamination; dangerous solid wastes; toxic chemicals in commerce; and mine, workplace and consumer product hazards—states retain primary public health authority.

The alliance we propose, a joint venture of the two key players most firmly tied to populations—health departments to the whole population by statutory authority and health plans to their subpopulation of members by the process of enrollment—must focus on two objectives: (a) Organization of population-based information and the analytic capacity to formulate and then evaluate strategies for improving the health of the population. (Only data aggregated and tied to population denominators can

create population-based information about exposures and diseases.) (b) Collaboration between public health and organized medical care where individual clinical services and community interventions together can have a synergistic effect on a given health problem.

To set the stage, we offer a list of tasks essential to strategically pursuing improved health, beginning with population-level analysis and proceeding to interventions with the potential to most effectively and efficiently improve health population-wide. The proposed alliance can strengthen our ability to carry out these tasks.

- **Monitor disease, injury, disability and death** in the whole population: when, where, and in whom are they occurring? This is often called disease (and injury) surveillance. Data gathering is best done by clinicians who see sick and injured

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people. For example, long before the creation of large clinical databases, 18th century English surgeon Percivall Pott observed scrotal cancer to be a common affliction of chimney sweeps. Today we know that carcinogenesis may begin with particular chemical exposures, and disease surveillance helps us associate diseases with exposures that may be preventable. In a recent and simple example, emergency room physicians observed an epidemic of elbow fractures and quickly made the association with in-line roller skates. Injury surveillance too, is a first step to preventing injuries—in this case, by leading to increased use of elbow pads.

Some problems are not evident until information is aggregated. There was an early breakthrough in understanding AIDS when gay men began to appear on the Centers for Disease Control's list of people seeking medication for Kaposi's sarcoma. Only rarely will such discoveries be possible—for example, through astute clinical observation, as in Percivall Pott's case—without a deliberate plan to aggregate and analyze information. But other than birth and death registration, aggregation is rarely systematic in this country. Sadly, the United States is one of the few industrial countries that is forced to rely on surveys to assess the health of its population; as yet there is no organized medical care system to provide population-based data.²

- **Monitor the environment for exposures** that may cause disease, injury, disability, or death: Who is exposed to what, how much of it, when, where, and for how long? This is often called environmental monitoring or hazard surveillance. Public health authorities can assemble information about how the population may be exposed in living and working environments to toxic chemicals, infectious agents,

and other hazards. This information becomes important for protecting potentially exposed and exposed individuals, both by eliminating offending dangers and by assuring proper individual clinical care for those already affected. For example, environmental monitoring, by measuring air contaminants, has demonstrated that poor indoor air quality contributes to asthma. Exposures can be prevented by attention to building design, materials, renovation, and maintenance, and especially ventilation. In addition, sensitized building occupants may need ongoing medical attention.

- **Intervene socially and institutionally to protect the public.** Public health authorities may act to remove hazards from the environment: bacteria and viruses from drinking water or lead from paint and gasoline. Where protection is lacking, they may promote or require it: urging the addition of iodine in table salt to prevent goiter or folate in enriched flour to prevent neural tube malformations. Other public health interventions insulate people from hazards, as when we install ventilation in dusty or fume-filled workplaces or disperse pollution away from people, sending it up tall smokestacks. These social or institutional interventions often require the authority of a public health agency (including environmental regulatory agencies) in order to act before the potential victims recognize the danger or are harmed.
- **Intervene with individuals for population-wide results.** Vaccination, for example, is at once a public health strategy and a medical intervention. Entire communities can be protected when vaccines are administered to enough people to induce immunity sufficient to reduce the spread of a disease. Even

those in whom a vaccine might not be effective can be protected, as herd immunity may break transmission, reducing exposures for susceptible individuals. Similarly, effective clinical treatment of people with tuberculosis is part of a population-based strategy to control the disease because it reduces everyone's likelihood of exposure. Certainly not every clinical intervention is closely linked to the health of others in the population, but effective ones that help the patient are capable of reducing the burden of disease and making the nation as a whole healthier.³

- **Evaluate all interventions** designed to reduce injury or disease. To see what works, population-based reviews must consider disease, injuries, disability, and death—examining records of births, deaths, disabilities, and diagnoses. As clinical medicine adopts an evidence-based approach to resource allocation, society must extend this evaluation to include social and institutional interventions in the community in addition to clinical ones that benefit individual patients. A society that devotes such a large proportion of its economy to individual diagnosis and treatment can certainly benefit from learning how precious resources can best be invested and deployed.

REASONS FOR OPTIMISM

A few notable successes in countries with organized medical care systems prompt us to call for wider application of their logic in the US. In the United Kingdom, public health authorities and general practitioners collaborated to achieve almost complete on-time immunization of children in the 1990s. The GPs delivered all the hands-on services, and the Department of Health provided information systems and guidance plus an indispensable ingredient: monetary rewards for achieving coverage goals practice by practice.⁴ In a few short years, vaccine coverage increased from under 70% to the point that more than 90% of GPs immunize more than 90% of children on their lists fully and on time. And every child is on a GP's list. In the UK, morbidity and mortality from vaccine-preventable diseases are now approaching the lowest attainable levels. As colleagues in the UK Department of Health have told us, the Department is now trying to establish similar systematic approaches to breast and cervical cancer screening.

In the Nordic countries, particularly in Finland and Sweden, clinical services are linked closely to workplace and environmental surveillance and regulation.⁵ Public health authorities investigate illnesses and injuries discovered by clinicians that could be related to the work environment and develop prevention strategies through consultation with workers' unions and employers. Problems ranging from the health effects of vibration to those caused by electromagnetic fields were suspected early and followed up quickly with studies and interventions.

TOWARD A MORE COMPREHENSIVE STRATEGY FOR THE US

We agree with others who view the current reorganization of medical services as a moment of opportunity, and we were not alone, at the time of President Clinton's health care reform, in seeing opportunities to link public health and managed care.^{1,6} The literature contains many recent examples of collaboration.⁷⁻¹¹ Some authors argue cogently that both efficiency and the health of the public can be improved through joint efforts. Some favor, as we do, moving clinical services, including services for Medicaid enrollees and uninsured indigents, out of public health departments and into health plans to allow public health agencies to devote their resources to analytic functions, community interventions that exceed the authority and expertise of clinicians, and guidance for clinical care. Some argue further that public health agencies can contribute more to improving clinical care by monitoring performance once they no longer compete for patients and payments and concentrate instead on advocating for universal enrollment in health plans and on enhancing outreach, transportation services, the cultural competence of practitioners, and other supports for vulnerable health plan enrollees. Others emphasize the broad range of players ready and willing to participate in community assessments or health promotion activities.

The US has been slow to develop a national health system. Yet we can still be the first country to consciously link and strategically ally public health agencies with our diverse, but increasingly organized, medical care system. The next logical step is to move beyond the limited examples of surveillance and services to seek a common understanding of threats to health and agree on which interventions will result in

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the greatest advantage for the entire population. The prescription should not be rigid, and it can certainly benefit from the contributions of many other groups. But it is public health and organized medical care which together hold the keys to comprehensively understanding our health problems and to deploying our resources efficiently to improve the health of the population.

Public health agencies will make their greatest contribution by using their unique statutory power to blunt health threats at their source. Clinical services will be most effective as a continuing point of contact with the individuals who make up the community. Together they might tackle such costly and multifaceted problem as falls in the elderly, where the effects of genetics, nutrition, drugs—prescription, over-the-counter, and illicit—alcohol, and exercise make it difficult for a clinician to help people soon enough or with medical interventions. Together they might also, following the Nordic model, establish programs of targeted screening to assure early clinical intervention for people with known workplace exposures. For example, because early treatment makes a difference, textile workers exposed to azo dyes would likely benefit from regular cytologic examinations for bladder cancer. Similar efforts might crack the persistent problem of vaccine injuries; these rare events remain poorly understood because we don't have large clinical databases to help link injuries to particular vaccines.¹² And better and earlier understanding of antibiotic resistance might guide research and development efforts as well as encourage more prudent use of antibiotics in [hu]man and beast.

If we succeed even modestly, we might be able to answer critical questions for the whole population: when and where to employ social and institutional interventions; how best to use individual clinical interventions; how to aim research and development; and

how to allocate resources wisely among these activities, including a rational division of labor in the middle ground where public health and medical care activities overlap.

In the literature urging collaboration, more words are devoted to healthy lifestyle promotion and to clinical strategies than to diminishing hazards at their sources, probably because the latter is often considered more politically problematic. Since 1962, when the Surgeon General first warned the public about the dangers of tobacco, clinicians have been left to treat people afflicted with tobacco-related illnesses and to admonish addicted smokers to quit. Direct challenges to the tobacco industry accelerated only after attorneys turned aggressive on behalf of states seeking to recover Medicaid expenditures.¹³ When effective intervention depends on cooperation from or regulation of an industry or the appropriation of public funds, a visible union between public health agencies and health plans might more quickly generate the political will to act.

PRACTICAL LIMITS

We are aware of practical limitations and risks in our approach as well as the need for forceful leadership. Merely aggregating information to support population-wide analysis is a monumental task. Health sector organizations, private and public, have designed information systems to meet their particular needs with little regard for the compatibility required to aggregate a health profile of the entire population. Whenever data sharing is involved, loss of privacy is of increasing concern. And, most fundamentally, the growing tendency to see information and insured patients as proprietary assets blurs the distinction between patient care and commerce.¹⁴ In a time of skepticism about corporate medicine and big government, only candid leadership will distinguish

data-driven, strategic interventions to improve the population health from today's intrusions in the name of cost-cutting and increasing corporate profits. In fact, success may depend on whether nascent efforts, such as interactive immunization registries, satisfy clinicians and the public or reinforce their skepticism about corporate intrusion into individual care decisions.

A NEW ENGLAND EXPERIMENT

In May 1998, the New England Regional Office of the Department of Health and Human Services convened state public health and managed care leaders from six states to start an endeavor that is likely to test the logic of public health–health plan alliances. Joseph L. Dorsey, MD, the medical director of Harvard Pilgrim Health Care, reported that the medical directors of the not-for-profit managed care organizations of Massachusetts had already identified as priorities for joint action some “care improvement projects” with potential for a public health role and that they welcomed public health leadership for a variety of reasons. They realized that an opportunity to improve health and efficiency regionally could reduce medical costs and increase the political will to extend insurance to everyone. Also, if the combined economic power of the managed care organizations were targeted systematically to health strategies explicitly sanctioned by public health authorities, antitrust considerations need not hamper collaboration. Moreover, inviting participation by all managed care

organizations would convey no market advantage to any one of them.

The scale of the New England joint venture should be sufficient to move from ad hoc experimentation at the local level to a methodical accumulation of experience and wisdom across the region. In gearing up this effort, the leaders debated whether to begin by assembling population data and analytic capacity in general, or by targeting a few specific problems. Although the former was intellectually appealing, participants believed a few quick successes would be essential for sustaining mutual commitment. Consequently, they have chosen the latter course, but the goals reach far beyond the three targeted areas of asthma, adult immunization, and tobacco control. Ultimately, this experiment will benefit from broad community participation, but the formative steps for creating a sustainable effort depend on linking the particular attributes of public health and organized systems for delivering clinical care.

Henrik Ibsen foresaw a dilemma that has hobbled us throughout the century. In *An Enemy of the People*,¹⁵ the physician hero confronted a society that for lack of political will was disinclined to protect the people's health. If managed care organizations across the country ally themselves with public health, the combined effort may provide the nation with the political will to overcome those reluctant to act decisively for the health of the public.

References

- Freeman P, Robbins A. Health care reform minus public health: a formula for failure. *J Public Health Policy* 1994;15:3:261-82.
- Pollock AM, Rice DP. Monitoring health care in the United States—a challenging task. *Public Health Rep* 1997;112:108-13.
- World Bank. World development report 1993: investing in health. Oxford (UK): Oxford University Press; 1993.
- Salisbury DM. Some issues related to the practice of immunization. *Int J Infect Dis* 1997;1:119-24.
- Elling RH. The struggle for workers' health: a study of six industrialized countries. Farmingdale (NY): Baywood Publishing Co.; 1986.
- Baker EL, Melton RJ, Stange PV, Fields ML, Koplan JP, Guerra FA, Satcher D. Health reform and the health of the public: forging community health partnerships. *JAMA* 1994;274:1276-82.
- Prevention and managed care: opportunities for managed care organizations, purchasers of health care, and public health agencies. *MMWR Morb Mortal Wkly Rep* 1995;44(RR-14):1-12.
- Institute of Medicine. Healthy communities: new partnerships for the future of public health. Washington: National Academy Press; 1996.
- Halverson PK, Kaluzny AD, McLaughlin CP, Mays GP, editors. Managed care and public health. Gaithersburg (MD): Aspen Publishers; 1998.
- Lasker RD and the Committee on Medicine and Public Health. Medicine & public health: the power of collaboration. New York: New York Academy of Medicine; 1997.
- Harris JR, Isham GJ, Smith M, guest editors. Prevention in managed care: joining forces for value and quality. *Am J Prev Med* 1998;14 Suppl:1-124.
- Chen RT, Glasser JW, Rhodes PH, Davis RL, Barlow WE, Thompson RS, et al. Vaccine Safety Datalink Project: a new tool for improving vaccine safety monitoring in the United States. *Pediatrics* 1997;9:765-73.
- Moore MC, Mikhail CJ. A new attack on smoking using an old-time remedy. *Public Health Rep* 1996;111:192-203.
- Freeman P, Robbins A. The U.S. health privacy debate: will there be comprehension before closure? *Int J Technol Assess Health Care*. In press 1999.
- Ibsen H. *An enemy of the people*. Winchester (MA): Faber & Faber; 1998.